



# GEORGIA

DEPARTMENT OF NATURAL RESOURCES

## ENVIRONMENTAL PROTECTION DIVISION

### Air Quality - Part 70 Operating Permit Amendment

**Facility Name:** U.S. Army Maneuver Center of Excellence – Fort Benning  
**Facility Address:** 1 Karker Street  
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**Parent/Holding Company:** United States Department of Defense, US Army  
**Facility AIRS Number:** 04-13-215-00021

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued an amendment to the Part 70 Operating Permit for:

#### **Changing the status of fifteen emergency generators to non-emergency generators.**

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Amendment and Permit No. 9711-215-0021-V-04-0. Unless modified or revoked, this Amendment expires simultaneously with Permit No. **9711-215-0021-V-04-0**. This Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in App No. 685172 dated July 28, 2022; any other applications upon which this Amendment or Permit No. 9711-215-0021-V-04-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **12** pages.



DRAFT

Richard E. Dunn, Director  
Environmental Protection Division

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**PART 1.0 FACILITY DESCRIPTION**

**1.3 Process Description of Modification**

To change the status of fifteen existing 525 kW stationary spark ignition (SI) internal combustion engines/emergency generators to non-emergency generators. The fifteen generators GEN1 through GEN15 will comply with the requirements of 40 CFR 60 Subpart JJJJ for non-emergency generators.

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### PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

#### 3.1.1 Additional Emission Units

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
GEN1 thru GEN15	Fifteen SI engine generators for non-emergency use. [Dixie Road Resiliency Generators]  Model Year: 2019 Total Input: 28.26 MMBtu/hr Total Output: 9 MW Type: SI ICE 4SLB	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart JJJJ 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ		

\* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

### 3.2 Equipment Emission Caps and Operating Limits

New Condition

- 3.2.9 The Permittee shall limit the hours of operation of the generators GEN1 through GEN15 to 3,800 hours combined, during any twelve consecutive month period in order to limit the discharge of NO<sub>x</sub> emissions into the atmosphere.  
[PSD Avoidance - 40 CFR 52.21]

### 3.3 Equipment Federal Rule Standards

New Conditions

- 3.3.3 The Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ – “National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines” and the applicable provisions of Subpart A - "General Provisions" for the operation of the generators GEN1 through GEN15.  
[40 CFR 63 Subparts A and ZZZZ]
- 3.3.4 The Permittee shall comply with all applicable provisions of the New Source Performance Standards (NSPS), 40 CFR 60 Subpart A – “General Provisions,” and Subpart JJJJ – “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines,” for the operation of the generators GEN1 through GEN15.  
[40 CFR 60 Subpart A and Subpart JJJJ]

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- 3.3.5 The Permittee shall not cause, let, suffer, permit or allow emissions from the generators GEN1 through GEN15 which contains in excess of the following emission limits over the entire life of the engine:  
[40 CFR 60.4233(e), 60.4234, and Table 1 of NSPS Subpart JJJJ]

ID No.	Emission Limits					
	grams per horsepower-hour (g/HP-hr)			ppmvd at 15% O <sub>2</sub>		
	NO <sub>x</sub>	CO	VOC	NO <sub>x</sub>	CO	VOC
GEN1 thru GEN15	1.0	2.0	0.7	82	270	60

\* The Permittee may choose to comply with the emission limits in units of either g/HP-hr or ppmvd at 15% O<sub>2</sub>.

\*\* NO<sub>x</sub> = Nitrogen Oxides, CO = Carbon Monoxide, VOC = Volatile Organic Compounds

- 3.3.6 The Permittee shall demonstrate compliance with the emission limits for the generators GEN1 through GEN15, as specified in 40 CFR 60 Subpart JJJJ by purchasing an engine certified to the emission standards in 40 CFR 60 Subpart JJJJ, for the same model year and maximum engine power.  
[40 CFR 60.4243(b)]

### Requirements for certified engines

- a. If the Permittee purchases a certified engine and operates and maintains the certified engine according to the manufacturer's emission-related written instructions, and keeps records of conducted maintenance, no performance testing is required. The Permittee shall also comply with the applicable requirements in 40 CFR Part 1068, Subparts A through D; or  
[40 CFR 60.4243(a)(1)]
- b. If the Permittee does not operate and maintain the certified engine according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the Permittee shall demonstrate compliance according to the following:  
[40 CFR 60.4243(a)(2)]
  - i. For engines less than 100 HP, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. No performance testing is required.
  - ii. For engines greater than or equal to 100 HP and less than or equal to 500 HP, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. The Permittee must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

- iii. For engines greater than 500 HP, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. The Permittee must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first

**Requirements for non-certified engines**

- a. If the Permittee purchases a non-certified engine, the Permittee shall demonstrate compliance according to the following:  
[40 CFR 60.4243(b)(2)]
  - i. For engines greater than 25 HP and less than or equal to 500 HP, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. The Permittee must conduct an initial performance test.
  - ii. For engines greater than 500 HP, the Permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. The Permittee must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first.

**3.4 Equipment SIP Rule Standards**

Modified Condition

- 3.4.1 The Permittee shall not cause, let, suffer, permit, or allow any emissions from each of **the generators GEN1 through GEN15**, the portable wood chippers with ID Nos. PWC1 and PWC2, the portable rock crusher with ID No. PRC1, the engines in the engine test cells with ID Nos. TC01 through TC21, the troop support center with ID No. TSC001, the spray paint booths with ID Nos. P006, P101, and P200, and the bead blasting unit with ID No. BB01, which exhibit visible emissions, the opacity of which is equal to or greater than forty (40) percent.  
[391-3-1-.02(2)(b)1]

New Condition

- 3.4.4 The Permittee shall not burn fuel containing more than 2.5 percent sulfur, by weight, in generators GEN1 through GEN15.  
[391-3-1-.02(2)(g)]

**PART 4.0 REQUIREMENTS FOR TESTING****4.1 General Testing Requirements**

- 4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 which pertain to the emission units listed in Section 3.1 are as follows:

**Modified Condition**

- a. Method 1 or 1A shall be used for the determination of sample point locations.
- b. Method 2 shall be used for the determination of stack gas flow rate.
- c. Method 2 or 2C shall be used for the determination of stack gas flow rate for the generators and engines in engine test cells.
- d. Method 3 or 3A shall be used for the determination of stack gas molecular weight.
- e. Method 3B shall be used for the determination of the correction factor or excess air. Method 3A may be used as an alternative.
- f. Method 4 shall be used for the determination of stack moisture.
- g. Method 5 shall be used for the determination of particulate matter emissions.
- h. Method 7 or 7E shall be used for the determination of nitrogen oxides (NO<sub>x</sub>) emissions.
- i. Method 9 and the Procedures of Section 1.3 of the above referenced document shall be used for the determination of the opacity of visible emissions.
- j. Method 19 shall be used to convert particulate matter concentration, as determined by other methods specified in this section, to emission rate (i.e., lb/MM Btu).
- k. Method 19, Section 12.5.2.2.3, shall be used for the determination of fuel oil sulfur content.
- l. Method 24 shall be used for the determination of volatile matter content, water content, density, volume solids, and weight solids in surface coatings.
- m. ASTM D 4057 shall be used for the collection of fuel oil samples.
- n. Method 10 shall be used to determine the carbon monoxide concentration or ASTM Method D6522-00 shall be used to determine the carbon monoxide and oxygen concentrations.

- o. Methods 25A with the use of a hydrocarbon cutter as described in 40 CFR 1065.265, or Method 18 shall be used for the determination of volatile organic compounds concentration.
- p. Method 320 or ASTM Method D6348-03 shall be used to determine the volatile organic compounds concentration.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.

[391-3-1-.02(3)(a)]

## **4.2 Specific Testing Requirements**

### **Modified Condition**

4.2.1 In accordance with the applicable provisions of:  
[40 CFR 60.8 and 40 CFR 63.7]

- a. 40 CFR 60.8, for any equipment which is subject to the *"New Source Performance Standards,"* constructed or modified at the facility, the Permittee shall conduct a performance test within 60 days after achieving the maximum production rate at which the equipment will be operated, but no later than 180 days after initial startup, unless the equipment is specifically exempted from testing in the applicable Subpart of 40 CFR 60. The tests shall be conducted using the test methods and procedures specified in Condition 4.1.3. The specific pollutants, sample volumes, run times, and other testing parameters shall be as specified in the applicable Subpart of 40 CFR 60.
- b. 40 CFR 63.7, for any equipment which is subject to 40 CFR 63 *"National Emission Standards for Hazardous Air Pollutants for Source Categories,"* constructed or modified at the facility, the Permittee shall conduct a performance test within 60 days after achieving the maximum production rate at which the equipment will be operated, but no later than 180 days after initial startup, unless the equipment is specifically exempted from testing in the applicable Subpart of 40 CFR 63. The specific pollutants, sample volumes, run times, and other testing parameters shall be as specified in the applicable Subpart of 40 CFR 63.

### **New Conditions**

4.2.2 The Permittee shall conduct initial and subsequent performance testing, as required by Condition 3.3.6, for NO<sub>x</sub>, CO, and VOC emissions from the generators GEN1 through GEN15 to demonstrate compliance with the NO<sub>x</sub>, CO, and VOC emission limits specified in Condition 3.3.5.  
[40 CFR 60.4243(a)(2) and 40 CFR 60.4243(b)(2)]



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- 4.2.3 The Permittee shall conduct the subsequent performance testing specified in Condition 4.2.2 for the generators GEN1 through GEN15, according to the procedures in 40 CFR 60.4244, which includes the following:  
[40 CFR 60.4244]
- a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load, while firing natural gas, and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 to 40 CFR 60 Subpart JJJJ.
  - b. The Permittee may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). If the stationary SI internal combustion engine is non-operational, the Permittee does not need to startup the engine solely to conduct a performance test; however, the performance test must be conducted immediately upon startup of the engine.
  - c. The Permittee must conduct three separate test runs for each performance test required, as specified in 40 CFR 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

**PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)**

**5.2 Specific Monitoring Requirements**

Modified Condition

5.2.1 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. A natural gas consumption meter to continuously measure and record the total quantity of natural gas, in cubic feet, burned in each of the boilers with ID Nos. H001, H002, and H003. Data shall be recorded monthly.  
[40 CFR 60.48c(g)(2)]
- b. A LPG consumption meter on the LPG peaking plant with ID No. N101. Data shall be recorded (in gallons) monthly.  
[PSD Avoidance - 40 CFR 52.21 and 40 CFR 60.48c(g)(3)]
- c. A fuel oil consumption meter to continuously measure and record the total quantity of distillate fuel oils fired (in gallons) in each of the boilers with ID Nos. H001, H002, and H003. Data shall be recorded monthly.  
[PSD Avoidance - 40 CFR 52.21 and 40 CFR 60.48c(g)(2)]
- d. A non-resettable hour meter to measure and record the number of hours operated for each of the engines **and generators GEN1 through GEN15** specified in Conditions 3.2.7 and **3.2.9**. Data shall be recorded monthly.  
[PSD Avoidance - 40 CFR 52.21]

## **PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS**

### **6.1 General Record Keeping and Reporting Requirements**

#### Modified Condition

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any period, except periods of gas curtailment, gas supply emergencies, and periodic testing on liquid fuel, during which any of the boilers with ID Nos. H001, H002, and H003 burn any non-gaseous fuels.

[40 CFR 63 Subpart JJJJJ Avoidance]

ii. Any period during which fuel oil burned in any of the boilers with ID Nos. H001, H002, and H003 did not meet the specifications in Condition 3.2.1.

[PSD Avoidance - 40 CFR 52.21 and 40 CFR 60.42c(d)]

iii. Any period during which fuel oil burned in any of the engines that drive the wood chippers with ID Nos. PWC1 and PWC2 and the engines in the engine test cells with ID Nos. TC01 through TC21 did not meet the specifications in Condition 3.2.3.

[PSD Avoidance - 40 CFR 52.21]

iv. Any period during which fuel oil burned in any of the engine that drives the portable rock crusher with ID No. PRC1 did not meet the specifications in Condition 3.2.4.

v. Any twelve consecutive month period during which the total amount of distillate fuel oils fired in the boilers with ID Nos. H001, H002, and H003, as determined in accordance with Condition 6.2.6(b), exceeds 1,000,000 gallons.

[PSD Avoidance - 40 CFR 52.21]

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- vi. Any twelve consecutive month period during which the total hours of operation for any wood chipper with ID Nos. PWC1 or PWC2, as determined in accordance with Condition 6.2.7, exceeds 400 hours.  
[PSD Avoidance - 40 CFR 52.21]
- vii. Any twelve consecutive month period during which the total NO<sub>x</sub> emissions from the engines/engine test cells specified in Condition 3.2.7, determined in accordance with Condition 6.2.10, exceed 39 tons during any twelve consecutive months.  
[PSD Avoidance - 40 CFR 52.21]
- viii. Any twelve consecutive month period during which the total amount of LPG delivered from the LPG peaking plant with ID No. N101, as determined in accordance with Condition 6.2.5, exceeds 630,800 gallons.  
[PSD Avoidance - 40 CFR 52.21]
- ix. **Any twelve consecutive month period during which the total combined hours of operation for the generators GEN1 through GEN15, as determined in accordance with Condition 6.2.16, exceeds 3,800 hours.**  
**[PSD Avoidance - 40 CFR 52.21]**
- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)
  - i. None required to be reported in accordance with Condition 6.1.4.

## 6.2 Specific Record Keeping and Reporting Requirements

### Modified Condition

- 6.2.11 The Permittee shall submit, with the report required by Condition 6.1.4, a semiannual report that contains the following records. The records shall be available for inspection or submittal to the Division upon request and contain:  
[391-3-1-.02(6)(b)1, and 40 CFR 70.6(a)(3)(i)]
  - a. The fuel supplier certifications, as specified in Condition 6.2.1, for each shipment of distillate fuel oil received during the reporting period and a statement signed by a responsible official that the records of fuel supplier certifications submitted represent all of the fuel oil combusted in the boilers with ID Nos. H001, H002 and H003 during the semiannual reporting period. If no fuel oil is combusted during the reporting period, the report shall so state.  
[PSD Avoidance - 40 CFR 52.21; 40 CFR 60.48c(d); (e)(11); and (j)]
  - b. The fuel supplier certifications, as specified in Condition 6.2.2, for each shipment of distillate fuel oil received during the reporting period and a statement signed by a responsible official that the records of fuel supplier certifications submitted represent all of the fuel oil combusted in the engines that drive the wood chippers with ID Nos.

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PWC1 and PWC2 and the engines in the engine test cells with ID Nos. TC01 through TC21 during the semiannual reporting period. If no fuel oil is combusted during the reporting period, the report shall so state.

[PSD Avoidance - 40 CFR 52.21]

- c. The fuel supplier certifications, as specified in Condition 6.2.3, for each shipment of distillate fuel oil received during the reporting period and a statement signed by a responsible official that the records of fuel supplier certifications submitted represent all of the fuel oil combusted in the engine that drives the portable rock crusher with ID No. PRC1 during the semiannual reporting period. If no fuel oil is combusted during the reporting period, the report shall so state.
- d. The total volume of LPG delivered by the LPG peaking plant with ID No. N101, calculated in accordance with Condition 6.2.5, for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.  
[PSD Avoidance - 40 CFR 52.21]
- e. The total volume of distillate fuel oils burned in the boilers with ID Nos. H001, H002, and H003, combined, calculated in accordance with Condition 6.2.6(b), for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.  
[PSD Avoidance - 40 CFR 52.21]
- f. The total combined operating hours for each wood chipper with ID Nos. PWC1 and PWC2, calculated in accordance with Condition 6.2.7, for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.  
[PSD Avoidance - 40 CFR 52.21]
- g. A NO<sub>x</sub> emission report, prepared from records, obtained in accordance with Conditions 6.2.8 through 6.2.10, containing the 12-consecutive month total quantities of NO<sub>x</sub> emitted from the engines/engine test cells ending in each calendar month of the semiannual reporting period.  
[PSD Avoidance - 40 CFR 52.21]
- h. The total combined operating hours for the generators GEN1 through GEN15, calculated in accordance with Condition 6.2.16, for the 12 consecutive month period ending with each calendar month in the semiannual reporting period.**  
**[PSD Avoidance - 40 CFR 52.21]**

### New Conditions

6.2.16 The Permittee shall use the hour meter required by Condition 5.2.1.d to determine and record the following:

[PSD Avoidance - 40 CFR 52.21 and 391-3-1-.02(6)(b)1(i)]

- a. The cumulative total hours of operation of the generators GEN1 through GEN15, as indicated by the hour meter, at the end of every calendar month.

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- b. The twelve consecutive month total hours of operation of the generators GEN1 through GEN15, ending at each calendar month in the semiannual reporting period. A twelve consecutive month total shall be defined as the sum of a calendar month's total plus the totals for the previous eleven (11) consecutive months.
- 6.2.17 The Permittee shall retain the following records for generators GEN1 through GEN15: [391-3-1-.02(6)(b)1. and 40 CFR 60.4245(a)]
  - a. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.
  - b. Maintenance conducted on the engines.
  - c. If the generator is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and requirements as required in 40 CFR Parts 1048, 1054, and 1060, as applicable.
  - d. If the generator, is not a certified engine or is a certified engine that is operating in a non-certified manner, documentation that each engine meets the emission standards limits specified in Condition 3.3.5.